REVEALING THE HYDRAULIC PARAMETERS RELATED TO MULTIPOINT INJECTION

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In the present paper we describe the equipment needed in order to reveal the hydraulic parameters in the case of multipoint injection. The equipment consists of elements from the Bosch Jetronic kit and a multipoint injection simulation module. For the hydraulic-type trials the tracked parameters were the following: *period T*, *wideness of the momentum LI*, *static flow* Q_s, *dynamic flow* Q_d, *flow Q*, *unit weight mass* Q_{dc}, *dynamic point PD*, *linearity deviation AL*, *ramp m* and m_a.

The KDJE-K 100 Jetronic Set kit allows measuring all the pressures and the eventual losses measuring the fuel admission and cooling intake parameters. We determined by calculus the hydraulic parameters that are specifically related to the multipoint injection process.

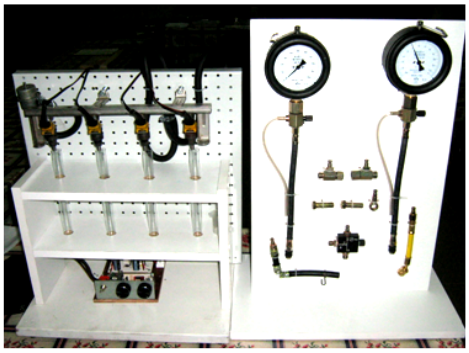

Figure 1: Overall plan of the test bench used to simulate the multipoint injection.

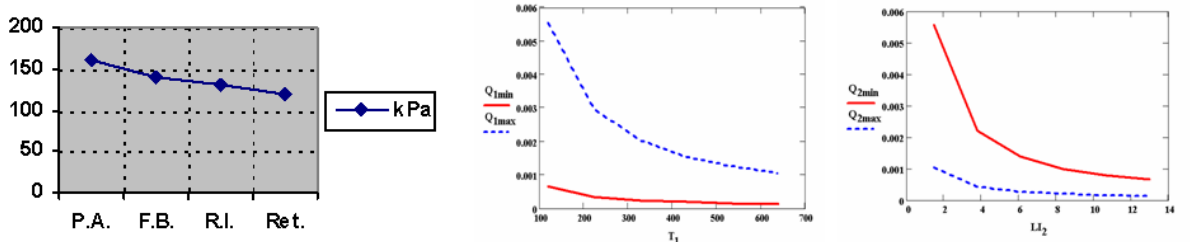

Figure 3: Variations of the fuelling system pressure and the change of Flow at T and LI

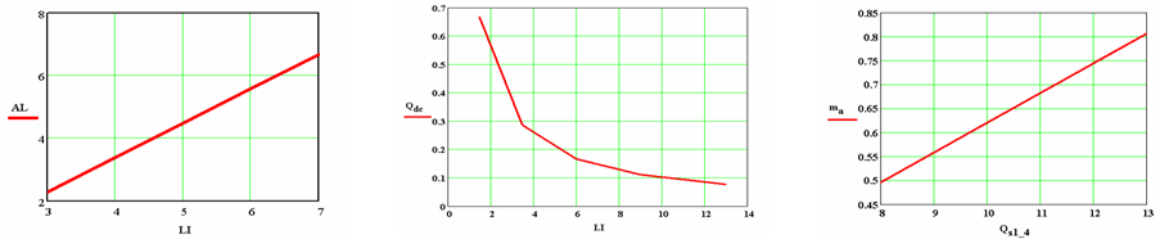

Figure 4: Linearity deviation depending on the momentum wideness, dynamic flow variation depending on the momentum wideness and approximate ramp depending on static flow

We determined the variations of the injection cycles as well as those of the electronic signals received from the electromagnetic systems linked to the injectors.

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